

**Basic Principles of Motor Learning and Skill Acquisition**

Motor Learning - process by which a person develops, through a combination of physical and psychological factors, the ability to perform a task

Although the muscles, tendons and bones would seem to be the primary factors involving coordinated movement, the study of motor development reveals that the root of motor activity lies in the sensory and nervous systems.

The senses must gather information about the context of the skill; nature of the activity, characteristics of the person performing the task and the external environment

Ie pitch shot in to a green  
Foul shot in basketball

Nov 30-6:32 AM

"Practice makes Perfect" - having learned how to perform a certain action and having practiced it repeatedly, it becomes easier to perform that task again. Our perceptual system takes in information for processing, our memories recall similar events and allow us to react in what we perceive as a successful manner

"Practice makes Permanent" **Perfect Practice makes Perfect**

The coordination of mind and body to produce a skill can be subdivided into two types of activity.

i) Automatic Motor Activity - involves very little thought and results in an action that mimics an unconscious reflex action ie Jordan Fade-Away Jump Shot

*Steph Curry - half court shot*

ii) Controlled Motor Activity - requires more thought and time to produce action

Ie Splitting the defense in a hockey game

Nov 30-6:41 AM

**Stages-of- Learning Model**

When an athlete attempts to master complicated skills involved in elite sport performance, the athlete gradually passes through three important stages.

**a) Cognitive Stage**

-achieve a basic understanding of the task  
ie hockey player - aware of the basic rules of the game, efficient skating posture, ability to give and receive a pass and create a shot on net

-athletes will often make major errors in an effort to demonstrate a skill and require further instruction on how to approach the task (miss the puck while taking a shot on net)

Nov 30-6:41 AM

**b) Associative Stage**

- characterized as a refining of skills which produce a more consistent demonstration of skill
- athlete is able to determine the improper technique and adjust to make a more accurate result
- ie follow through to a target line while throwing a football

**c) Autonomous Stage**

- skill becomes an almost automatic sequence of events
- athletes require little attention to the basic approach to a skill and can focus almost entirely on external factors
- ie an approaching defender, position on court or a head-wind

Nov 30-6:42 AM

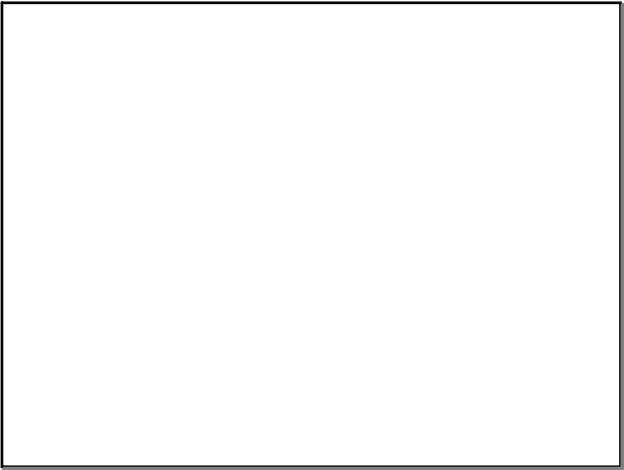
Factors effecting skill acquisition;  
Incorrect understanding of movement  
Poor physical ability  
Poor coordination  
Lack of concentration (distractions)  
Appropriate equipment and clothing  
External Factors ie weather

Nov 30-6:43 AM

Create drills which reflect the three stages of learning

- 1) Puck-Handling
- 2) Over-head Serve
- 3) Soccer Throw-in

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Nov 15-2:16 PM